



**National Institute for Literacy**

# **The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy**

**Hosted by the National Insitute for Literacy**

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# National Institute for Literacy

## Moderated by:

- **Dr. Sandra L. Baxter**, Director, National Institute for Literacy

## Panelists:

- **Dr. Sheida White**
  - Project Director, National Assessment of Adult Literacy, National Center for Education Statistics
- **Dr. Ian Bennett**
  - Assistant Professor at School of Medicine and a Research Associate at Graduate School of Education at the University of Pennsylvania
- **Toni Codell**
  - Adult learner nationally known speaker on the topic of health literacy, who draws from her personal struggle with dyslexia.

# The National Assessment of Adult Literacy: Health Literacy Results

*A webcast presentation*

**August 29, 2007**

**Sheida White**

**NAAL Project Officer**

**National Center for Education Statistics**

# Discussion Topics

- Brief background
- Definition of Health Literacy
- Measuring Health Literacy
- Comparing Health Literacy with other types of literacy
- Examples of Health Literacy tasks
- Reporting the results
- Describing adults with *Below Basic literacy*
- Accessing health-related Information

# National Assessment of Adult Literacy (NAAL)

- Assessment of the English literacy of U.S. adults
- Conducted in 1992 and 2003
- Nationally representative sample of more than 19,000 adults age 16 and older
- One-on-one administration in households and prisons
- Prose, Document, Quantitative and Health Literacy Scales

# What is the Definition of Health Literacy ?

- The ability of U.S. adults to read, understand, and apply health-related information presented in written English to function in society and achieve one's goals.

# Measuring Health Literacy

- The NAAL health literacy tasks are specifically designed to measure health literacy.
- The health literacy tasks encompass three domains of information: clinical, prevention, and navigation of the health care system
- The health literacy scale does not measure the ability to obtain information from nonprint sources

# Health Item Sample

Use the 1980 World Almanac to answer the following question:

--Copy three food sources, named in the almanac, that contain vitamin E.

146 Agriculture — Nutrition

## Food and Nutrition

Food supplies proteins, carbohydrates, fat, water, vitamins and minerals. Nutrition is the way your body takes in and uses these ingredients to maintain proper functioning. If you aren't eating foods that give your body what it needs, your health will deteriorate.

### Proteins

Proteins are composed of amino acids and are indispensable to the diet. They build muscles, and repair the body. Best sources: eggs, milk, soybeans, meat, fish, meat, poultry. But one of these foods will supply all the necessary proteins.

### Fats

Fats provide energy by furnishing calories to the body and by carrying vitamins A, D, E, and K. They are the most concentrated source of energy in the diet. Best sources: butter, margarine, salad oils, nuts, olives, eggs, meat, chicken, fish, beef.

### Carbohydrates

Carbohydrates provide energy for body function and activity by supplying immediate calories. The 3 kinds of carbohydrates are sugars, starches, and cellulose. Best sources: wheat and cereals, legumes, nuts, potatoes, fruits, milk.

### Vitamin E (tocopherol) - helps protect red blood cells. May aid the circulatory system and counteract the aging process. Best sources: wheat germ, whole grains, eggs, peanuts, organ meats, margarine, vegetable oils, green leafy vegetables.

**Vitamin B<sub>1</sub> (thiamine)**—essential to the nervous system, heart, and liver. Best sources: meat, fish, poultry, wheat germ, brewer's yeast, brown rice, whole grain cereals.

**Vitamin B<sub>2</sub> (riboflavin)**—useful to healthy eyes. Best sources: liver, almonds, wheat germ, mushrooms, hemp seeds, whole milk, milk products.

**Vitamin B<sub>6</sub> (pyridoxine)**—important to the regulation of the central nervous system. Best sources: whole grains, meats, nuts, brown peas.

**Vitamin B<sub>12</sub> (cobalamin)**—necessary for the formation of red blood cells. Best sources: meat, fish, eggs, soybeans.

**Niacin**—enhances the health of skin, tongue, and digestive system. Best sources: poultry, peanuts, fish, eggs, meat, milk, and milk products, eggs.

**Other B vitamins** are—folic acid, riboflavin, pantoic acid, biotin, PABA, cyanocobalamin, and pantothenic acid.

**Vitamin C (ascorbic acid)**—enhances collagen, a protein necessary for the formation of skin, ligaments, and bones. It helps heal wounds and averted fractures, and aids in resisting some types of virus and bacterial infections. Best sources: citrus fruits and juices, tomatoes, broccoli, Brussels sprouts, potatoes and sweet potatoes, tomatoes, cabbage.

**Vitamin D**—important for bone development. Best sources: sunlight, fortified milk and milk products, fish, egg yolk, organ meats.

**Vitamin E (tocopherol)**—helps protect red blood cells. May aid the circulatory system and counteract the aging process. Best sources: wheat germ, whole grains, eggs, peanuts, organ meats, margarine, vegetable oils, green leafy vegetables.

**Vitamin K**—necessary for formation of prothrombin, which helps blood to clot. Best sources: green leafy vegetables.

### Recommended Daily Dietary Allowances

Source: Food and Nutrition Board, National Research Council

The allowances are amounts of nutrients recommended as adequate for maintenance of good nutrition in healthy persons on the U.S. Diet. Data should be based on a variety of common foods in order to provide advice consistent for which human requirements have been less well defined.

	Years (months)	Weight (pounds)	Height (in.)	Calories	Protein (grams)	Carbohydrate (grams)	Iron (mg.)	Vit. A (I.U.)	Vit. C (mg.)	Vit. E (mg.)	Vit. B <sub>1</sub> (mg.)	Vit. B <sub>2</sub> (mg.)	Vit. B <sub>6</sub> (mg.)	Vit. B <sub>12</sub> (mcg.)	Ascorbic acid (mg.)
Infants	0-12	15-20	20-30	100-150	10-20	100-150	10-20	1,000-2,000	10-20	10-20	10-20	10-20	10-20	10-20	
Children	1-12	20-100	30-60	1,000-2,000	20-50	100-200	10-20	1,000-2,000	10-20	10-20	10-20	10-20	10-20	10-20	
Adolescents	13-18	100-150	50-70	2,000-3,000	50-70	200-300	10-20	1,000-2,000	10-20	10-20	10-20	10-20	10-20	10-20	
Adults	19-30	150-200	60-70	2,500-3,000	60-70	250-300	10-20	1,000-2,000	10-20	10-20	10-20	10-20	10-20	10-20	
Elderly	31+	150-200	60-70	2,500-3,000	60-70	250-300	10-20	1,000-2,000	10-20	10-20	10-20	10-20	10-20	10-20	



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No. of Items Per Page: 20

[All Items](#)

**Protein**

Protein provides protein carbohydrates, fat, water, vitamins and minerals. Protein is the key to your health and it can even help you lose weight. Protein is essential for life. If you aren't eating foods that have protein, you will lose your health and life. Protein is the key to your health and life.

**Protein**

Protein is essential for life. Protein is the key to your health and life. Protein is the key to your health and life. Protein is the key to your health and life.

# Health Literacy & Literacy Are Closely Related

## Similarities:

- Both involve the ability to recognize and understand words, search text, and make text-based inferences

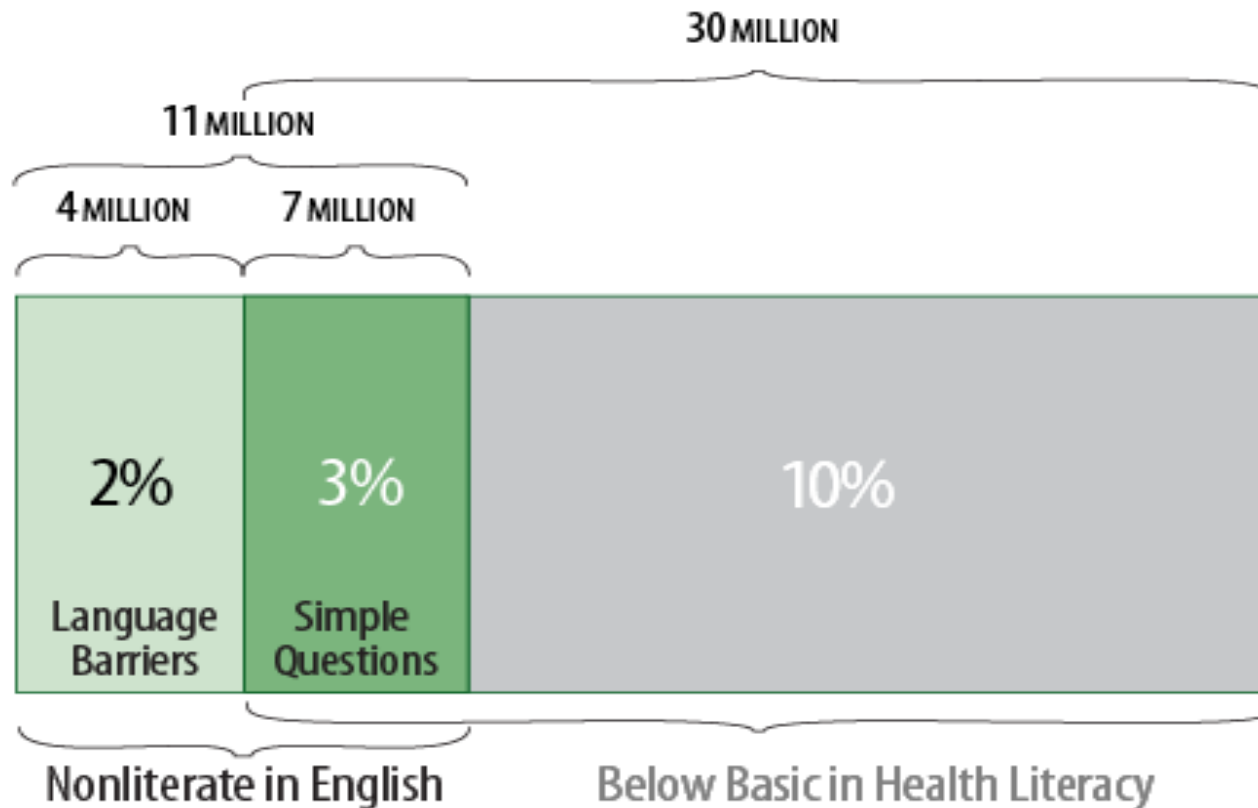
## Differences:

- The health literacy scale requires some information about health and the U.S. health system, including :
  - ✓ common health-related vocabulary
  - ✓ typical structure of written health materials
  - ✓ workings of the health care system

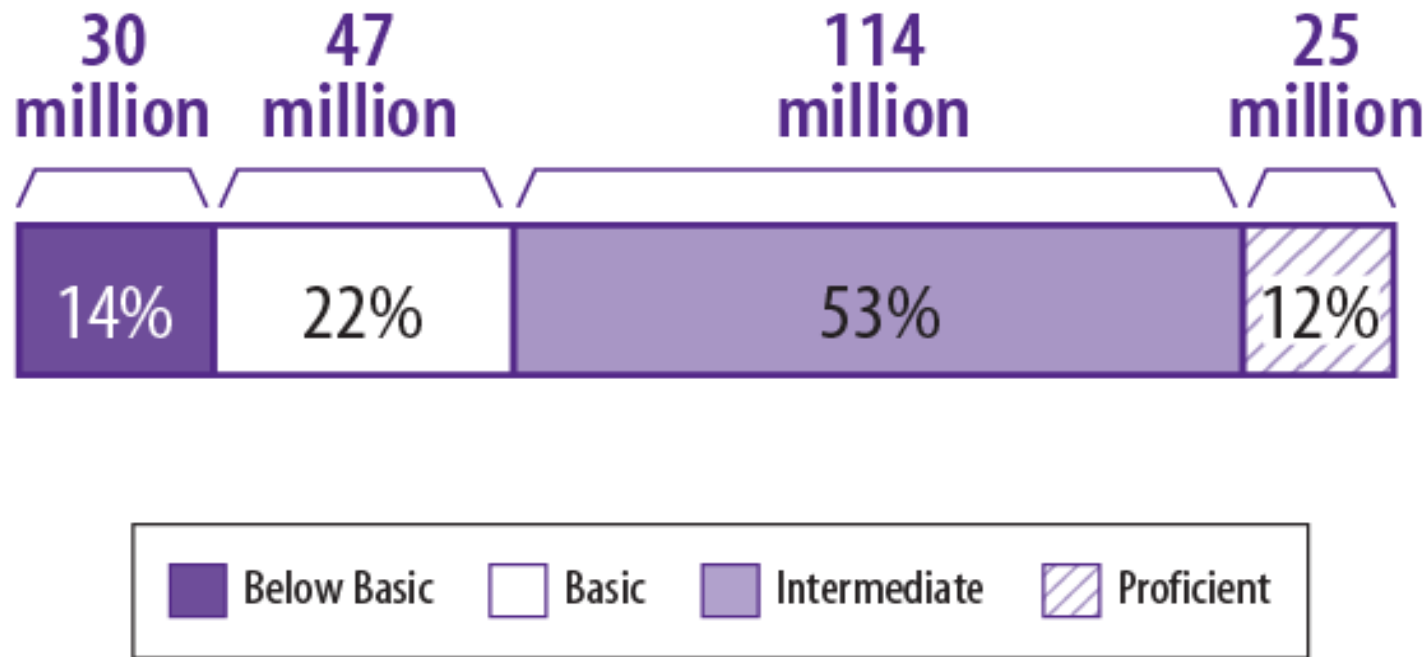
TOTAL	5.00
TAX DEDUCTION	13.75
ATE WH	82.50
CT	

# Reporting Results

# Overlap Between *Below Basic* and *Nonliterate* in English



# Number & Percentage of Adults in Each Health Literacy Level: 2003



NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003 and 4 percent in 1992) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

# Examples of Tasks that Adults with *Basic* or *Below Basic Literacy* May Not Be Able to Do

- Approximately 80 million adults have less than 67 percent probability of successfully answering the following questions:
  - Interpret an over-the-counter drug label
  - Know when a child should receive a vaccine from a chart
  - Use a body mass index (BMI graph).

SOURCE: Kutner, M., Greenberg, E., Jin, Y., and Paulsen, C. (2006). *The Health Literacy of America's Adults: Results From the 2003 National Assessment of Adult Literacy* (Figure 1.1) (NCES 2006-483). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

# Percentage of Adults in the ***Below Basic*** Health Literacy NAAL Population: 2003

Characteristic	Percent in <i>Below Basic</i> population	Percent in total population
Did not graduate from high school	51	15
Did not speak English before starting school	39	13
Adults reporting poor health	10	4
Hispanic adults	35	12
Age 65+	31	15
No medical insurance	36	18
Did not obtain health information over the Internet <sup>1</sup>	80	43
Black adults	19	12
One or more disabilities <sup>2</sup>	48	30

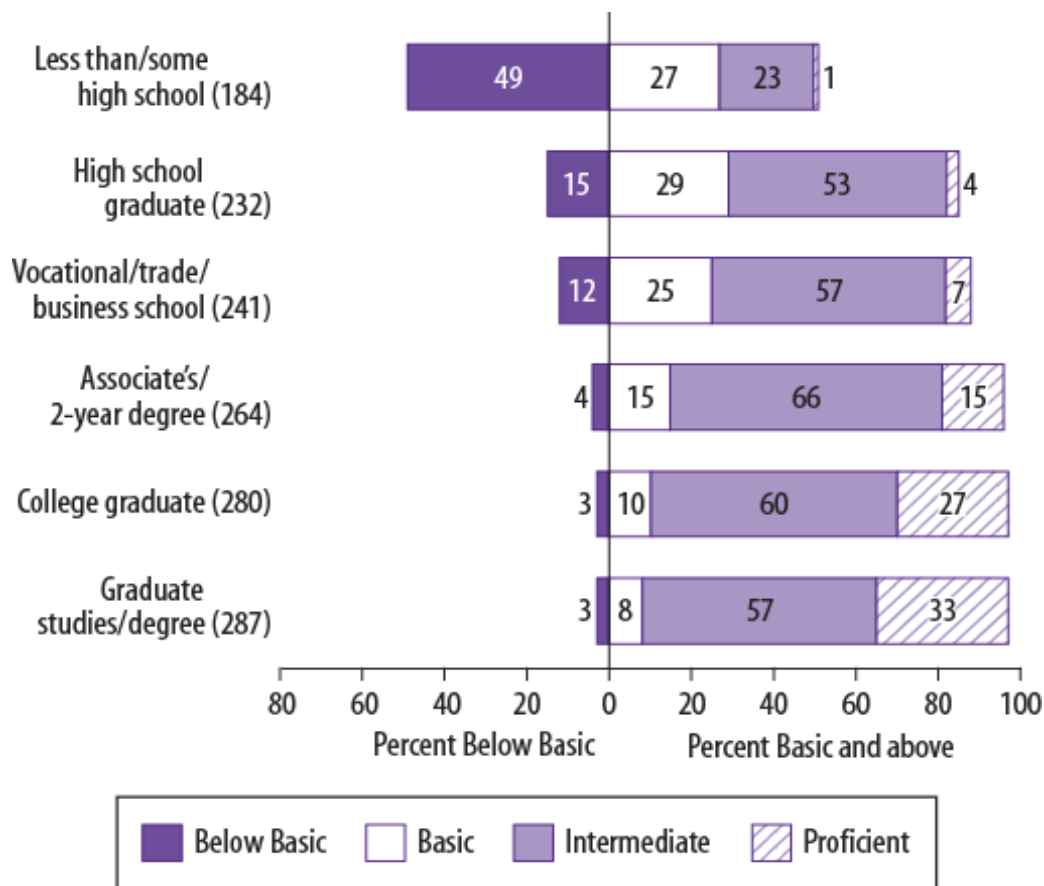
<sup>1</sup>The "Did not obtain health information over the Internet" category does not include prison inmates because they do not have access to the Internet.

<sup>2</sup>Disabilities include vision, hearing, learning disability, and other health problems.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy (NAAL).



# Percentage of Adults in Each Health Literacy Level, by Educational Attainment : 2003

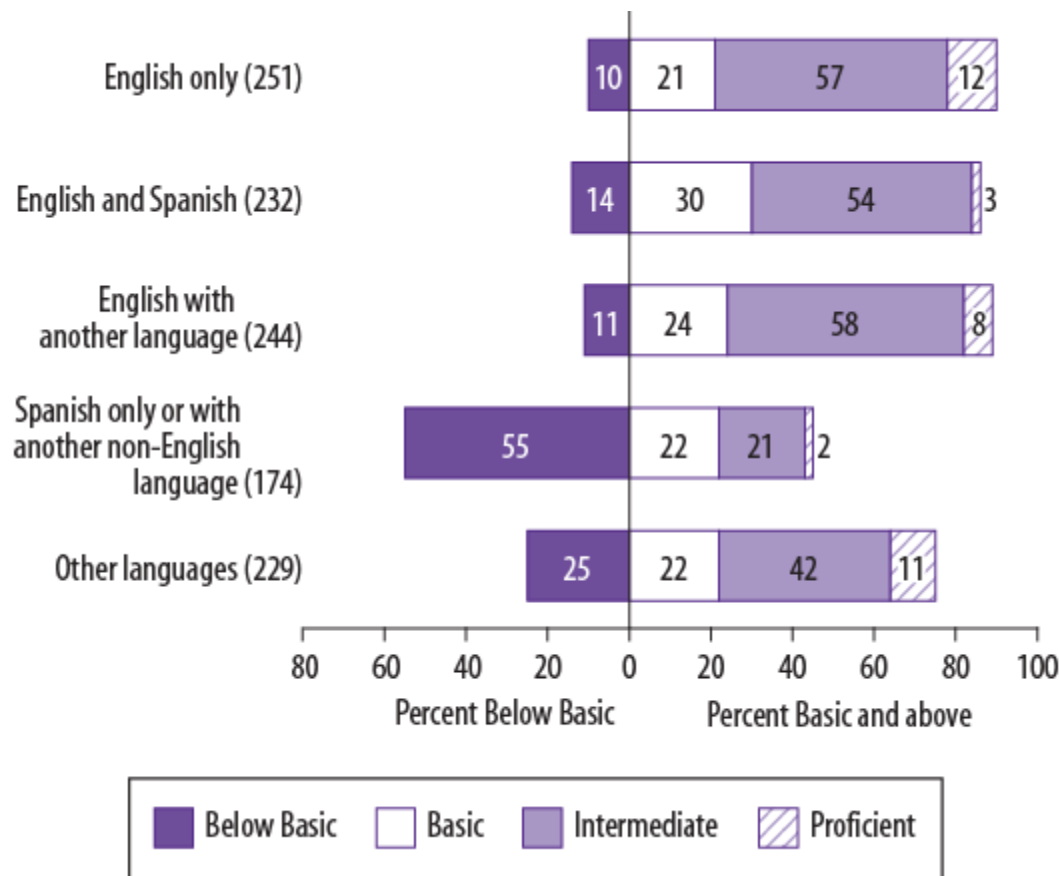


NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003) are excluded from this figure.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.



# Percentage of Adults in Each Health Literacy Level, by Languages Spoken Before Starting School: 2003



NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003) are excluded from this figure.

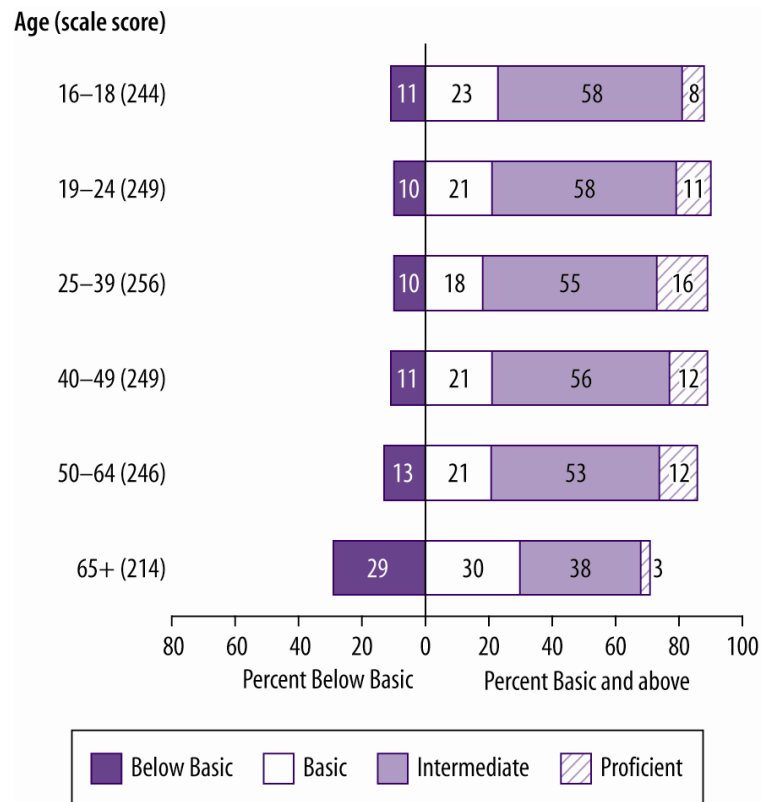
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

# Percentage of Adults in Each Health Literacy Level, by Self-Assessment of Overall Health: 2003



NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or mental disabilities (3 percent in 2003) are excluded from this figure.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy.

# Percentage of Adults at Each Health Literacy Level, by Age: 2003

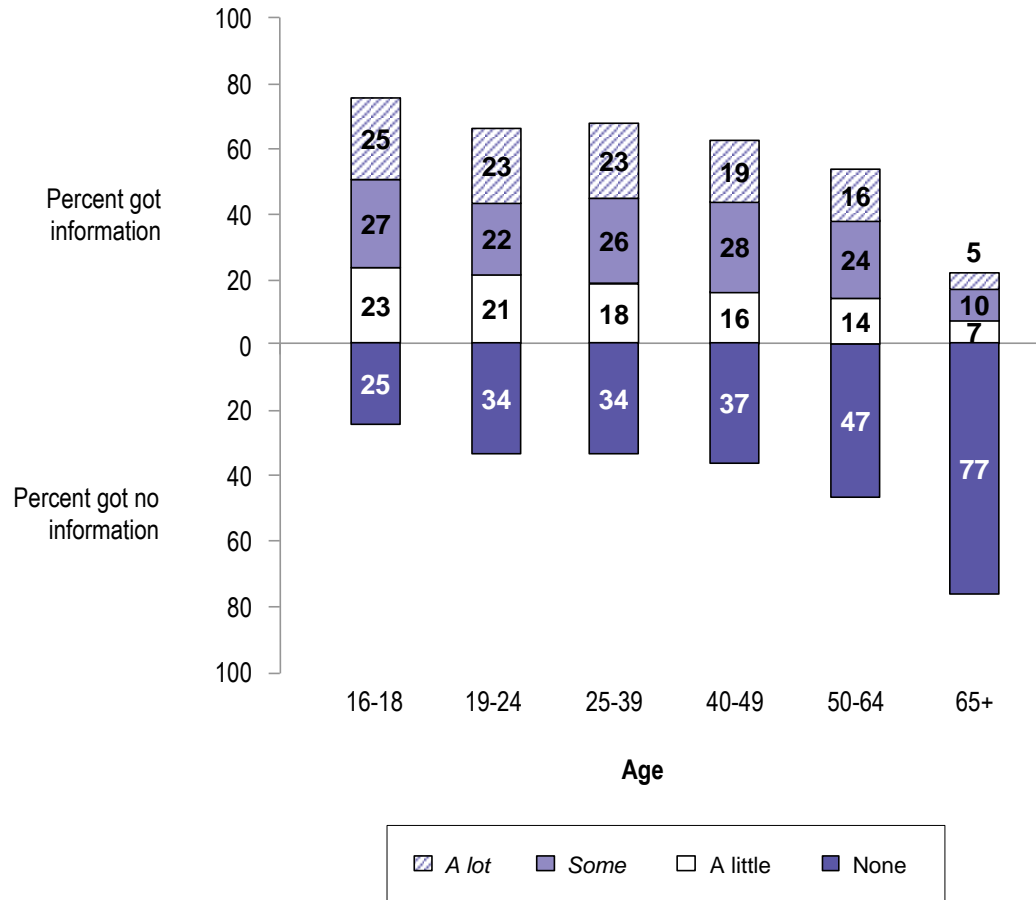


NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy (NAAL). Taken from figure 7-8 in *Literacy in Everyday Life: Results From the 2003 National Assessment of Adult Literacy* (Kutner et al. 2006).

# Accessing Health information

# Percentage of adults obtaining health information from the Internet by age: 2003



NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 2003 National Assessment of Adult Literacy (NAAL).

# Accessing NAAL Data

- Public-use data files and user guide available on the NAAL web site
- Restricted-use data files:
  - On CD-ROM
  - Requires special license
  - Includes user guide and electronic code book
- NAAL Data File Training

# Upcoming Reports

- National Assessment of Adult Literacy: Indirect County and State Estimates for 1992 and 2003
- The Basic Reading Skills of America's Adults: Results From the 2003 National Assessment of Adult Literacy
- Technical Report and Data File User's Manual
- Understanding Functional Literacy: A Multidimensional Theory of Functional Literacy and its Application to the National Assessment of Adult Literacy



# Visit NAAL Website: <http://nces.ed.gov/naal>



## The Health Literacy of America's Adults Results From the 2003 National Assessment of Adult Literacy



U.S. Department of Education  
NCES 2006-483



## Key Concepts and Features of the 2003 National Assessment of Adult Literacy



## Literacy in Everyday Life Results From the 2003 National Assessment of Adult Literacy



U.S. Department of Education  
NCES 2007-480



## National Assessment of Adult Literacy (NAAL) A First Look at the Literacy of America's Adults in the 21<sup>st</sup> Century

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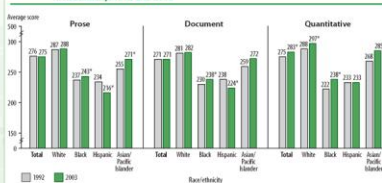


### Average Prose and Document Literacy Scores Rise for Blacks and Asians But Decrease Among Hispanics

The 2003 National Assessment of Adult Literacy (NAAL) measures the English literacy of America's adults (people age 16 and older living in households or prisons). The average quantitative literacy scores of adults increased 8 points between 1992 and 2003, though average prose and document literacy did not differ significantly from 1992 (figure 1).

Among Blacks, average prose literacy scores increased by 6 points and average document literacy scores rose by 8 points between 1992 and 2003 (figure 1). The average prose scores of Asians/Pacific Islanders increased as well, rising 16 points between 1992 and 2003. The average prose literacy scores of Hispanics fell 18 points from 1992 to 2003, while average document literacy scores decreased by 14 points. Average prose and document literacy scores among Whites did not change significantly. (Differences are discussed in this report only if they were found to be statistically significant at the .05 level. Standard errors for all tables and figures in this report are available on the NAAL website.)

Figure 1. Average prose, document, and quantitative literacy scores of adults, by race/ethnicity: 1992 and 2003



\* Significantly different from 1992.  
NOTE: Adults are defined as people 16 years of age and older living in households or prisons. Adults who could not be interviewed due to language spoken or cognitive or hearing disabilities (n=200) and persons in 1992 are excluded from the figures in 1992. Respondents were identified directly only in 1992; respondents were allowed to identify multiple times in 2003. 2 percent of respondents identified multiple times and are not included in the White, Black, or Asian/Pacific Islander categories in this figure. All adults of Hispanic origin are classified as Hispanic, regardless of race. The Asian/Pacific Islander category includes Native Hawaiian, Non-Hispanic White, Black, Hispanic, Asian/Pacific Islander, American Indian/Alaska Native, and Multiracial/Other. Although not reported separately, American Indian/Alaska Native and Multiracial/Other are included in the NAAL website.  
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, 1992 National Adult Literacy Survey and 2003 National Assessment of Adult Literacy.



## Literacy Behind Bars Results From the 2003 National Assessment of Adult Literacy Prison Survey

U.S. Department of Education  
NCES 2007-473







**National Institute for Literacy**

# **Toni Cordell**

**Adult Learner  
Health Literacy Expert**



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## **Question and Answer Period**

**Thank you for joining us for today's webcast. The webcast will be archived at our website in about two weeks.**

**The National Institute for Literacy provides leadership on literacy issues across the lifespan. For more information about this and our other projects, visit us online: <http://www.nifl.gov>.**